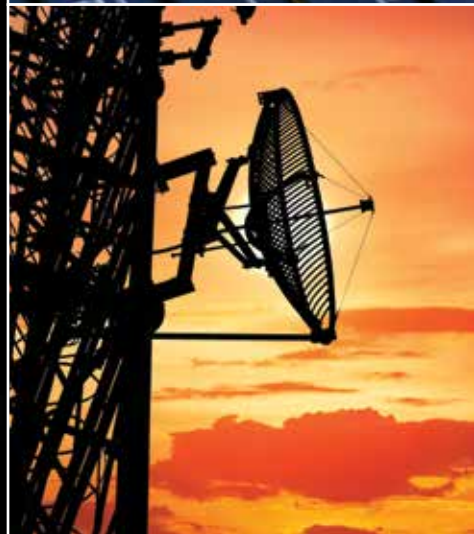# OCC®

Connections You Can Count On.™

INDUSTRY SOLUTIONS: BROADCAST

At OCC, we've always been known for our innovative, reliable products. Thanks to the increasingly complicated demands of the broadcast industry, our customers don't just need smart products—they need smart answers. That's why you can depend on the experts at OCC to provide data transmission solutions for every broadcast challenge, including deployable mobile units, permanent infrastructures, audio-visual systems, and more. Discover how some of the top sports, entertainment, and business organizations in the world have taken advantage of OCC Broadcast Solutions in a variety of different ways, and explore new highlights of OCC's extensive fiber and copper connectivity product line—designed specifically for the growing needs and requirements of the broadcast industry.

OCC BROADCAST SOLUTIONS

Innovative, Reliable Products
+ Smart, Customized Service
= SOLUTIONS FOR ALL YOUR BROADCAST CONNECTION NEEDS

LESS IS MORE.

LESS CHALLENGE
We are specialists who can provide solutions for your most challenging broadcasting needs and applications. Let us relieve the headache.

LESS TIME
By using innovative products like our pre-terminated enclosures, assemblies, and kitting, we can help you design a customized system that reduces installation time by 25%.

LESS WORRY
Our cabling and connectivity product solutions and pre-terminated "Plug-and-Play" cable assemblies are best known for their superior strength, reliability, and data integrity—undergoing rigorous testing beyond industry standards used by other manufacturers.

BOTTOM LINE: MORE VALUE
By thinking long term and using innovative, high-performance products, you'll have solutions that will save you money.

INDEX:

Loaded Cabinet

Procyon Blade©

With advances such as Ultra HD 4k, video over IP, and multi-channel audio in the broadcasting market, greater demands are being put on data transmission systems and speeds. Many traditional copper solutions that served broadcasting well over the years have reached their transmission speed limits. The future of broadcasting, with higher resolutions, 3D, and yet-to-be-determined emerging technologies, requires data rates of up to 12Gb/s and beyond for video and 10, 40, or 100Gb/s for the backbone or central data network. Fiber optic technology, with its ability to deliver high-bandwidth digital, low-signal-loss data streams at long distances, transmission with no EMI (electromagnetic interference), and a smooth transition to video as IP, is ideally suited to meet the most challenging broadcast applications. OCC's fiber optic broadcast products are specifically designed to withstand the challenges of high-definition broadcast signals for flawless, real-time transmission and unsurpassed reliability for the network backbone. Factors that make OCC's fiber optic broadcast cables ideal for the broadcast industry include:

• **OCC's special Core-Locked™ jacket** is extruded under high pressure directly over the cable's core, resulting in the internal surface of the cable jacket having helical cusped ridges that interlock with the subcables. This helps keep the cable cross-section circular for better crush and impact protection, and allows it to maintain superior tear resistance during installation.

• **Helical stranding** is a time-tested cable construction design proven to provide flexibility, survival in difficult pulls, and excellent mechanical protection for the optical fibers. This design ensures that no single element of the cable receives more stress than the other elements, thus equalizing the stress load associated with particularly tough installations.

• **Our water-blocked fiber optic cables** provide the best water protection system available by combining Core-Locked™ tightbound cable with super absorbent polymer aramid yarn. This design also retains the termination cost advantages of gel-free and powder-free tight-buffered cable.

• **OCC's Ultra-Fox™ and Ultra-Fox™ Plus cable** provides a primary coating of UV-cured acrylate material and a tight-fitting secondary coating of hard elastomeric polymer buffer.

All of these factors make OCC's cables a practical and reliable means of high capacity data transmission in challenging environments, without the fragility normally associated with traditional fiber optic cables.

To complement our broadcast cables, OCC manufactures a variety of rugged multi-channel fiber optic and electro-optic connectors. One such family of products is our compact Mini-Hermaphroditic Connector (MHC® II). The hermaphroditic design allows cable assemblies to be daisy-chained together, making it simple to extend camera range without the need for gender-changing adapters. Power or control signals for the cameras may be supplied using hybrid connector options that add electrical and optical signals within the same connector body. These connectors withstand extreme environmental demands, and they are specifically designed for reliable HD signals.

INTRODUCING OCC SMPTE™

Offering the durability you expect from OCC, these new SMPTE cables allow you to source all your connection needs from one manufacturer.

CUSTOMER: DIVERSIFIED

THE CHALLENGE

Diversified, a leader in custom media-related solutions, has a deep heritage in broadcast systems. Many broadcast facilities require a unique cable infrastructure with a need for durability and ease of installation. These challenging installations involve pulling cable through conduit that will stay in place as lasting infrastructures.

THE OCC SOLUTION

OCC's 6- and 12-strand DX Series Indoor/Outdoor distribution cables are ideal for challenging installations. Our DX cable has the inclusion of a rigid, central-strength member, which is of vital importance in permanent installations. OCC's cable is durable enough to withstand rigorous tension as it is pulled through conduit.
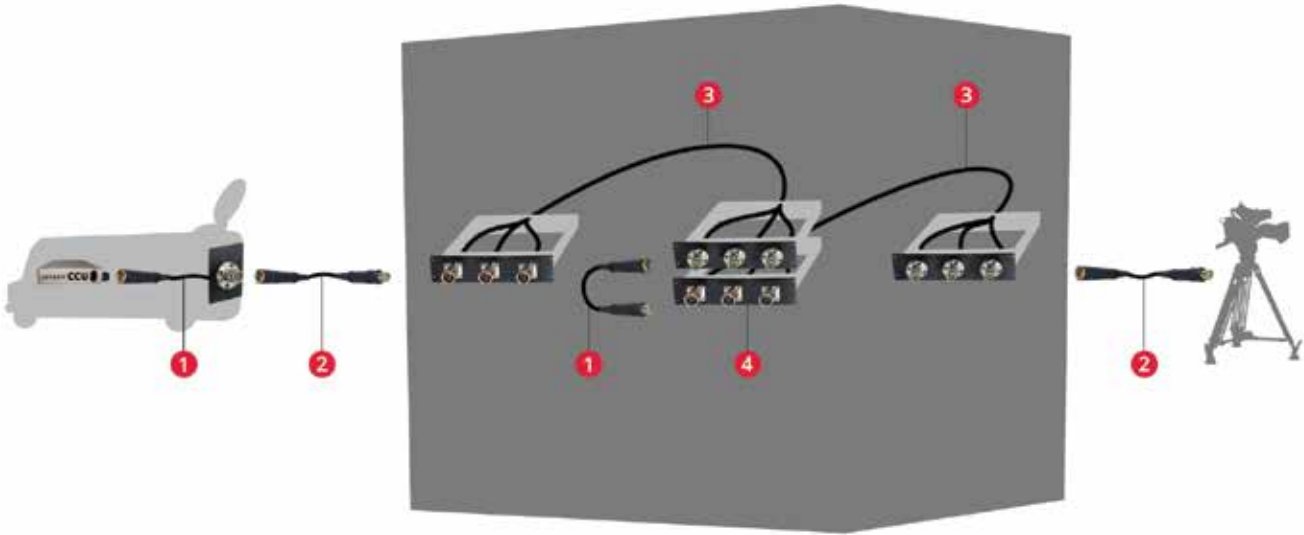
HC CABLE

OCC's HC Cable is the highest density in the industry (up to 288 strands) with the smallest OD on the market: 15mm

STADIUM APPLICATION PRODUCTS

	PART NAME	PART NUMBER
1.	SMPTE Essential Cable Assembly	OCA-FAP1MAP1001-****F
2.	SMPTE Tactical Cable Assembly	OCA-FAP1MAP1002-****F
3.	SMPTE 3-n-1 Stadium Cable-Riser/Plenum	CX021HBAB9GR, CX021HBAB9YP
4.	SMPTE Prepopulated Patch Panel Enclosure	Contact your OCC Sales Rep

*Variations available. Please contact your OCC Sales Representative.

"Our team has total confidence in handling OCC cable and knows signal continuity is maintained in the toughest installations."

- Justin Guzman, Project Engineer for Diversified

CUSTOMER: INDIANAPOLIS MOTOR SPEEDWAY (IMS PRODUCTIONS)

THE CHALLENGE

Remote broadcasts, like those performed by IMS Productions Mobile Unit Group, demand the brisk deployment of dozens of strands of cable to cameras that fly over football fields, hang from cranes, and are then regathered and tossed into crates to be shipped to the next tough venue. Most importantly, in all of these harsh broadcasting environments, it must survive again and again.

THE OCC SOLUTION

OCC's durable Broadcast Series cable is utilized for all IMS field events. It looks and feels like OCC's acclaimed MilTac, 12-strand, field-deployable, military-grade cable, but is somewhat lower in cost.

MARS REEL SYSTEM

OCC's MARS REEL SYSTEM is described as "faster, easier, and safer to deploy and retrieve cable."

- As seen in US Army PS Magazine, April 2016

OUTSIDE BROADCAST APPLICATION PRODUCTS

	PART NAME	PART NUMBER
1.	SMPTE Essential Cable Assembly	OCA-FAP1MAP1001-****F
2.	SMPTE Tactical Cable Assembly	OCA-FAP1MAP1002-****F
3.	Modular Advanced Reel System (MARS)	AFO-0100-T-M-1*

*Variations available. Please contact your OCC Sales Representative.

> "OCC has also begun making their cable specifically tailored for us so that we can deploy and connect it more quickly, so, they're partnering with us, as opposed to just saying, 'Here's our product, go use it.'"
>
> *-Paul Nijak, Director of Engineering, IMS Productions*

CASE STUDY: BOOZ ALLEN HAMILTON

THE CHALLENGE

Booz Allen Hamilton is an international technology and management consulting firm with locations in over 80 countries. BAH needed cutting-edge AV Solutions to connect their offices across the world while maintaining consistency and reliability.

THE OCC SOLUTION

OCC provided pre-terminated assemblies to ensure optimum performance and reliability. Each assembly came labeled and packaged to create swift Plug-and-Play kits, which reduced installation time and cost.

PROCYON BLADE© OCC'S PROCYON BLADE can reduce space inside the rack by 42%. Fit 288 strand all in a 4RU, instead of the typical 7RU.

AUDIO-VISUAL APPLICATION PRODUCTS

	PART NAME	PART NUMBER
1.	Wall Mount Box with Termination	WTC12/24B*
2.	Rack	OF4503*
3.	BX Series Cable-Riser/Plenum	BX***DSLX9KR/BX***KALT9QP
4.	RTC/RTS Enclosure	RTS2U-6APB*
5.	Adaptor Plate	6112DLC5OG *
6.	LC Connector	FXC-LC5G-6*
7.	LC Fiber Jumper	D5LC-LC-3MG *

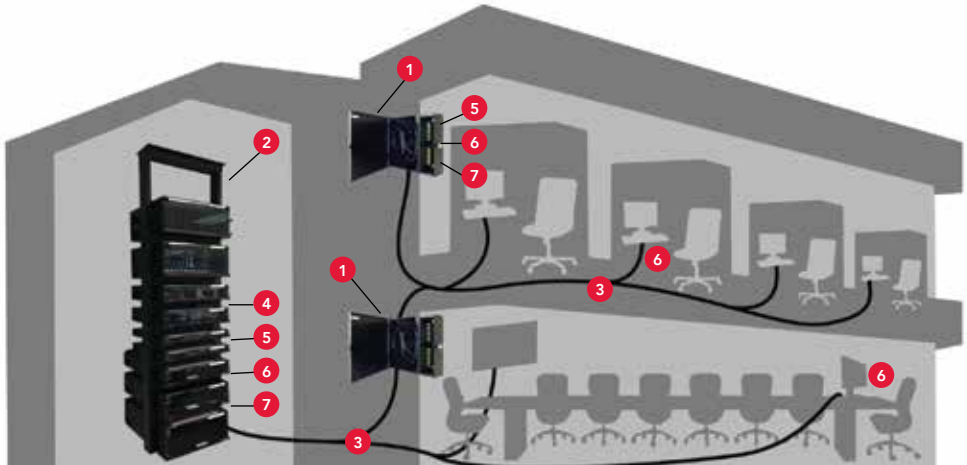*Variations available. Please contact your OCC Sales Representative.

"This has been a very significant development because it has reduced deployment and installation time by 25%, as well as saving significant money on labor."

-Gary Neufeld, AV Engineering Manager, Booz Allen Hamilton

For more than 25 years, OCC has been dedicated to serving our customers with a broad range of the highest quality fiber optic assemblies worldwide. We make sure that our assemblies meet the individual requirements of the wide variety of fiber connectivity and backshells available in the market. We offer a diverse product family with the products you need, including SMPTE assemblies, and the commitment to deliver them when you need them. OCC has standard assemblies in stock for fast shipping turnaround, in addition to the ability to create custom assembly solutions for your needs. OCC is also a certified Canare™ HFO Assembler.

CABLE ASSEMBLIES FOR PATCH CABLES AND CAMERA CABLES

PART NUMBER	PART NAME
OCA-FAP1MAP1005-****F	SMPTE FLEX Cable (FCFA/FCMA)
OCA-FAP1MAP1002-****F	SMPTE TACTICAL Cable (FCFA/FCMA)
OCA-FAP1MAP1001-****F	SMPTE ESSENTIAL Cable (FCFA/FCMA)

CAMERA CONTROL UNIT ASSEMBLIES TO PATCH PANEL

PART NUMBER	PART NAME
OCA-MAP1FFP1008-****F	FCMA/FCFRCA, SM, PLENUM, 2F/6E
OCA-MAP1FFP1007-****F	FCMA/FCFRCA, SM, RISER, 2F/6E

PIGTAIL ASSEMBLIES

PART NUMBER	PART NAME
OCA-FFR1SCP1006-****F	Panel Mount Plug Pigtail Assembly
OCA-MFR1SCP1006-****F	Panel Mount Socket Pigtail Assembly

* Denotes length of cable. Variations of SMPTE cables available.

SMPTE Assembly on Mars Reel

STUDIO APPLICATION PRODUCTS

	PART NAME	PART NUMBER
1.	SMPTE CCU Assembly to Patch Panel-Riser/Plenum	OCA-MAP1FFP1008-****F, OCA-MAP1FFP1007-****F
2.	SMPTE Cable-Riser/Plenum	C-008HBAA5KR, CX008HBAA9KP
3.	SMPTE Enclosure	Contact your OCC Sales Rep
4.	SMPTE Tactical Cable Assembly	OCA-FAP1MAP1002-****F

*Variations available. Please contact your OCC Sales Representative.
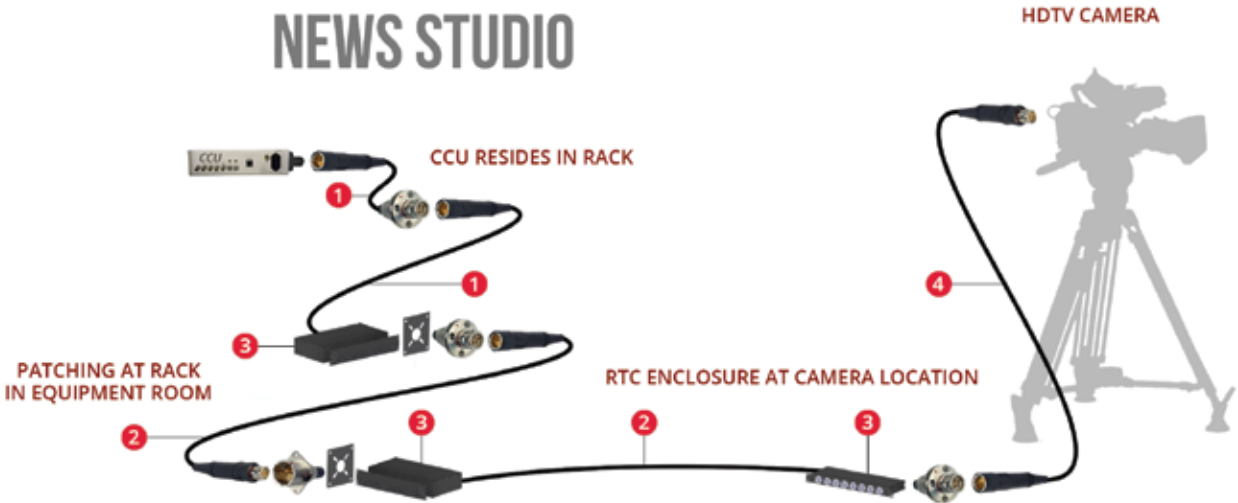
REPAIR & RESTORATION

In the fast-paced and intense broadcast industry, products need to be durable and reliable. But the reality is that breaks happen, and they need to be fixed quickly.

At OCC, we not only offer reliable products, but also Repair and Restoration Services for most broadcast connectivity and cable products in the market. OCC's Repair and Restoration Services provide value to our customers, whether it's through our diverse product family or helping to extend the life of our competitor's products. OCC also offers ongoing maintenance and testing of your cable assemblies.

Please contact us at 1.877.509.1500 for a quote and quick lead time estimation.

LEAD TIME:

- 24-hour turnaround on quotes
- 1-3 days to repair if necessary materials are on-site
- 3-5 days to repair once materials received if not on-site

SMPTE™ Flex

CONNECTIVITY

CABLES

HC Cable
OCC's High-Capacity cable bundles subgroups of 12 fibers into compact, flexible cables of up to 288 fibers. Ideal for permanent infrastructure where hundreds of fibers need to be run through small conduits. It is a perfect complement to the Procyon Blade.

DX and BX Series Cables for Broadcasters
OCC's tight-buffered distribution and breakout style cables are designed for broadcasters to use in a deploy-and-retrieve scenario. Small and lightweight, yet durable and resistant to cuts and abrasion, these cables are designed to be easy to use, yet extremely rugged.

Standard LC, SC, ST, FC
Complete system integration services for fiber optic assemblies using harsh environment fiber cabling systems.

MHC II® and MHC III®
OCC's Hermaphroditic connectors are rugged yet small connectors suitable for use in harsh environments. The genderless mating of the MHC II and III allows for quick and easy connections in the field.

OCC's L-Jack, M-Jack, and R-Jack
Robust fiber optic and copper connectors that couple the small form factor of traditional LCs, MPOs, and RJ-45s with the trusted reliability of OCC harsh environment connectors.

EZ-Mate
The OCC EZ-MATE hermaphroditic-style connectors can withstand thousands of mating cycles and come in sizes ranging from 2 to 24 fibers.

Field Terminable Plugs
OCC's Category 6A field terminable plug is designed to support 10 Gigabit networks and can be easily terminated using parallel jaw pliers.

ENCLOSURES & ACCESSORIES

MARS Reels
MARS is a lightweight, modular system that is easily transported. It is ideal for applications where cable needs to be deployed, reeled in quickly and stored efficiently.

RTC/RTS Enclosures
OCC is bringing decades of experience with fiber management in the data center environment to the broadcaster. The RTC/RTS is a solid steel enclosure that can handle whatever you throw at it.

Racks
OCC's complete line of free-standing racks and cabinets provide seamless, upscale integration for any size installation, whether in a building or in a mobile studio setting.

Procyon Blade
OCC's Procyon Blade product family of high-density network solutions is designed to provide superior organization, accessibility, and density of fiber connections—up to 288 fibers in only 4RU of space.

Procyon Cassettes
OCC's Procyon Cassettes are designed to provide easy transition of trunk cables terminated with MTP/MPO connections to LC duplex connectivity in your broadcast center or structured cabling project.

CABLES

SMPTE Cables
Compliant with the SMPTE 311 standard, OCC's hybrid fiber/copper cables have copper conductors and optical fibers in a single cable. In addition, OCC offers a variety of SMPTE compatible options, such as our 3-in-1 Stadium cable, which is ideal for connecting up to 3 cameras through a single cable.

Category 5e, 6, and 6A
More than just fiber, OCC also provides Category cable solutions for your copper-connectivity needs.

occfiber.com